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EXAMINER

PARKER, FREDERICK JOHN

ART UNIT PAPER NUMBER

1762

DATE MAILED: 09/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/773,371

Applicant(s)

OHBAYASHI ET AL.

Examiner

Frederick J. Parker

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 July 2005.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 17,18 and 20-32 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 17,18,20-32 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendment***

#### ***Specification***

The amendments in response to the Objections to the Specification of the Previous Office Action are acknowledged and appreciated, and the Examiner withdraws the objections.

#### ***Claim Rejections - 35 USC § 112***

The amendments in response to the 35 USC 112 rejections of the Previous Office Action are acknowledged and appreciated, and the Examiner withdraws the rejections.

1. The rejections of the previous Office Action are withdrawn and replaced by the new rejections below necessitated by amendment.

#### ***Claim Rejections - 35 USC § 103***

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

1. Claims 17,18-20,22,26,27,29,31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al.

Kobayashi et al teaches forming ink jet recording sheets formed by applying a coating composition of water or other solvent, inorganic particles, and hydrophilic resin binder (PVC, MC, etc) onto a support and drying over a period of constant temperature as described on col. 9, 41-47; col. 12, 2-5; col. 15, 50-52. Since drying is for a specific time period at a given temperature , after that time the onset of cooling beings a period of falling drying rate, to form a colorant receptive layer per claims 17-18. The layer is then treated with a solution comprising a silan (sic) coupling agent additive. The agent reduces bleeding or blooming of subsequently

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applied ink (“image stabilizer”) per claim 29. The forming of the receptive layer coating solution includes adjusting pH to 4.5 (per claim 31) and may include an anti-static agent (a “surface active agent” since it changes surface activity) per claim 26.

Per claim 18, the incorporation of a solution comprising an additive at a specific point in a process is simply a matter of choice which would not have been expected to produce any difference in outcome, absent a clear and convincing showing to the contrary, since further drying of the agent solution is required. As to claim 19, applying the ink receptive coating followed by the agent-containing solution in the same coating line, or in separated sequential coating lines would have been expected to provide equivalent results, absent a clear and convincing showing to the contrary, and therefore does not involve inventiveness over the prior art, *In re Tatincloux* 108 USPQ 125. MPEP 2144.04E states a continuous process of a claim would have been an obvious variation in light of a batch process of the prior art, and accordingly Applicants’ limitation to the continuous line (“same coating line...”) would have been an obvious variation which does not patentably distinguish over the prior art. As to claim 20, since the processes of the independent claim is obvious over *Kobayashi et al*, it would have been reasonable to expect the references also meet the limitations of claim 20. Per claim 22, winding of the coated sheet prior to drying would have been an obvious manufacturing step, dependant upon the logistics of the process, since there would not have been expected to be any difference in outcome whether the sheet is rolled or not rolled. The viscosity of the solution coating agent is not stated, nor limited; however, one of ordinary skill would have optimized viscosity to provide a desired degree of distribution of the agent in the ink receptive layer per claim 27.

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to carry out the process of Kobayashi in a continuous mode as opposed to a batch mode because it is well-settled that the change would have been obvious and does not patentable distinguish over the prior art.

2. Claims 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al in view of Patterson et al US 4732786.

Kobayashi et al is cited for the same reasons previously discussed, which are incorporated herein. Applying a solution comprising a polyvalent metal additive is not disclosed.

Kobayashi et al forms an ink jet receptive layer on a sheet. Patterson et al teaches on col. 2, 66 to col. 3, 41 to form a similar hydrophilic resin-based formulation to which is added a polyvalent metal complexing agent to cause immobilization of the polymer. The criticality of controlling pH is discussed on col. 3, 15-43, including maintaining a pH of about 5-8.5, overlapping claims 31-32. The subject matter as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made if the overlapping portion of the pH ranges disclosed by the reference were selected because overlapping ranges have been held to be a prima facie case of obviousness, see *In re Wortheim* 191 USPQ 90. The polyvalent metal solution can be mixed with the formulation OR separately applied at any time during the coating process, encompassing after application and drying of the polymer coating.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the process of Kobayashi by incorporating the polyvalent metal solution of

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Patterson et al to the applied polymer film to provide complexing of the polymer to form the ink receptive layer.

3. Claims 23-25,28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al in view of Saito US 6197381.

Kobayashi et al is cited for the same reasons previously discussed, which are incorporated herein. A polyolefin resin paper substrate is not disclosed.

Saito teaches forming an ink receptive layer comprising binder and inorganic particles on a sheet substrate, and includes applying a hardener coating composition to the dried, ink-receptive coating (col. 7, 1-8). The sheet substrate includes a polyolefin coated paper (col. 1, 59-63).

As to claim 25, since the meaning of the formula is uncertain, and the processes of the independent claim is anticipated by both Kobayashi et al and Ichinose et al, it would have been reasonable to expect the references also meet the limitations of claim 25.

The maximum water content of the paper is not stated nor limited, and therefore is inclusive of claim 24.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the process of Kobayashi et al by utilizing the substrates and hardener application of the similar method of Saito because of the expectation of successfully forming an ink receptive sheet for ink jet printing.

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4. Claims 17-22,27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ichinose et al US 6685999.

Ichinose et al teaches making a coated recording medium for inkjet printing by coating a substrate with a formulation comprising inorganic particles and hydrophilic binder. The sheet substrate may be a polyethylene (= olefin) coated paper, per claim 23. The coating is dried at or above 100C to evaporate the alcohol and/or water solvents (col. 13, 41-50; col. 18, 6-15), which ultimately inherently requires cooling at a falling rate. Subsequently a liquid ink comprising colorant additives is applied by printing, and the colorants are absorbed by the inorganic constituents of the layer, meeting (c ) of claim 17.

Per claim 18, the incorporation of a solution comprising an additive at a specific point in a process is simply a matter of choice which would not have been expected to produce any difference in outcome, absent a clear and convincing showing to the contrary, since further drying of the agent solution is required. As to claim 19, applying the ink receptive coating followed by the agent-containing solution in the same coating line, or in separated sequential coating lines would have been expected to provide equivalent results, absent a clear and convincing showing to the contrary, and therefore does not involve inventiveness over the prior art, In re Tatincloux 108 USPQ 125. MPEP 2144.04E states a continuous process of a claim would have been an obvious variation in light of a batch process of the prior art, and accordingly Applicants' limitation to the continuous line ("same coating line...") would have been an obvious variation which does not patentable distinguish over the prior art. As to claim 20, since the processes of the independent claim is obvious over Ichinose et al , it would have been reasonable to expect the references also meet the limitations of claim 20. Per claim 22, winding

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of the coated sheet prior to drying would have been an obvious manufacturing step, dependant upon the logistics of the process, since there would not have been expected to be any difference in outcome whether the sheet is rolled or not rolled. The viscosity of the solution coating agent is not stated, nor limited; however, one of ordinary skill would have optimized viscosity to provide a desired degree of distribution of the agent in the ink receptive layer per claim 27.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to carry out the process of Ichinose et al in a continuous mode as opposed to a batch mode because it is well-settled that the change would have been obvious and does not patentable distinguish over the prior art.

### ***Double Patenting***

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Claims 17,28 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 17,20 of U.S. Patent No. 6582802. Although the conflicting claims are not identical, they are not patentably distinct from each other because while both form the same ink receiving layer and drying, the instant application incorporates an



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additive solution which can include a hardener, whereas '802 simply cites a hardener, the hardener solution form being merely an obvious choice.

The added limitation "in the same coating line...." is an obvious variation for the reasons discussed above, and therefore it does not overcome the double patenting rejections.

### ***Response to Arguments***

Applicants amendments and arguments have been fully considered.

The amendment "in the same coating line...." does not distinguish over the prior art or overcome the double patenting rejection because applying the ink receptive coating followed by the agent-containing solution in the same coating line, or in separated sequential coating lines would have been expected to provide equivalent results, absent a clear and convincing showing to the contrary, and therefore does not involve inventiveness over the prior art, *In re Tatincloux* 108 USPQ 125. MPEP 2144.04E states a continuous process of a claim would have been an obvious variation in light of a batch process of the prior art, and accordingly Applicants' limitation to the continuous line ("same coating line...") would have been an obvious variation which does not patentable distinguish over the prior art.

The Examiner has considered Applicants' confusing comments regarding the limitations of constant and falling drying rates. In the diagram provided in Applicants' response, the solid line depicting Applicants' "II constant drying rate period" would have reasonably be called a constant falling drying rate because the rate of moisture content/ temperature reduces as a function of time. What Applicants call "III a falling drying rate period" is a substantially constant rate as a function of time. Given the meanings known of one of ordinary skill, a "constant drying

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rate” would be a drying rate not substantially changing or varying with time, or remaining unchanged under specified conditions. A “falling drying rate” would be one which falls/ reduces with time or specific conditions. Hence Applicants arguments are at odds with the conventional meanings of the phrases . The Examiner interprets the claims as written using such conventional meanings. Hence arguments are not persuasive and rejections as above are maintained.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frederick J. Parker whose telephone number is 571/ 272-1426. The examiner can normally be reached on Mon-Thur. 6:15am -3:45pm, and alternate Fridays.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on 571/272-1423. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Frederick I. Parker  
Primary Examiner  
Art Unit 1762

fjp